

REMARKS AND ARGUMENTS

Claims 1, 3-8, 10-15, 17-21, and 23-24 are in this case.

Claims 2, 9, 16, 22, and 25 have been canceled.

Claims 1, 8, 15, 21, and 24 have been amended. No new matter has been added.

In amended independent claims 1, 8, 15, 21, and 24, the subject matter of canceled claims 2, 9, 16, 22, and 25, which respectively depend therefrom has been incorporated thereinto. Reexamination and reconsideration are respectfully requested for claims 1, 3-8, 10-15, 17-21, and 23-24, which have been rejected in their originally presented forma as follows.

REJECTION UNDER 35 U.S.C. §102(e)

Claims 1, 3-8, 10-15, 17-21, and 23-24 have been rejected in their originally presented form under 35 USC §102(e), the examiner alleging that they are fully met by Camp, Jr., et al. (USP 6,070,078). This rejection is respectfully traversed.

As amended, all of the independent claims 1, 8, 15, 21, and 24 recite that a time difference is transmitted between the code phases of the received GPS signals. This is neither shown nor suggested in the Camp, Jr., et al. reference, and for at least this reason the rejection should be withdrawn.

REJECTION UNDER 35 U.S.C. §103(a)

Since the subject matter of canceled claims 2, 9, 16, 22, and 25 has been incorporated into independent claims 1, 8, 15, 21, and 24, the §103 rejection formerly applied to the canceled claims should now apply to the amended claims. More specifically, the examiner had rejected claims 2, 9, 16, 22, and 25 under 35 U.S.C. §103(e), alleging that they are obvious from Camp, Jr., et al., in view of Ruutu, et al. (USP 6,445,928). This rejection is respectfully traversed.

In his rejection the examiner characterized Ruutu, et al. as follows:

“Ruutu et al., in the same field of endeavor, teaches a method to calculate a time difference between the reference code phases for the first one and the second one of the signals (column 3, line 57 – column 4, line 46) in order to determine the location of the receiver by means of the GPS.”

It is respectfully submitted that this characterization is not entirely accurate. More particularly, the method taught at the cited portion of Ruutu is not to determine a time difference between the reference code phases for the first one and the second one of the

signals. Ruuru indicates that “the calculating means 11 can also determine on the basis of the calculated time differences the real time difference of a transmitter, which has not been subjected to direct time difference measurements.” (Col. 5, lines 58-61). The time differences referred to are specified elsewhere in the reference. The Observed Time Difference (OTD) is the “reception moments of signals transmitted by transmitters, eg. base stations, [which] are measured with respect to each other” (Col. 1, lines 23-25). The Geometrical Time Difference (GTD) is a calculated time based upon the distances of the base stations to the receiver (Col. 4, lines 5-10). And the Real Time Difference is the difference between the two (Col. 4, line 24-27). This is different from code phases, as claimed by applicant in independent claims 1, 8, 15, 21, and 24. As described in applicant’s specification, “[t]he code phase of a received SV [satellite vehicle] signal is established by the location in time of a predetermined position within the signal’s CA [course acquisition] code. As the CA codes are periodic, the possible locations of the predetermined position (i.e. the possible code phases) may be represented as points along the circumference of a circle.... ” This is quite different from the time of reception of ordinary signals from a transmitter.

Secondly, the Ruutu reference is apparently not a GPS device. The GPS reference at Col. 4, lines 43-46 is apparently one way by which the geometrical time difference can be calculated. Thus, the examiner’s statement that the “time difference between the reference code phases for the first one and the second one of the signals [is necessary] in order to determine the location of the receiver by means of the GPS” is not accurate. The teaching of Ruutu, et al. uses the location of the receiver determined by GPS techniques to determine the geometrical time difference, not the other way around.

As far as the obviousness of substituting the teaching of Ruuto, et al. into the teaching of Camp, Jr., et al. is concerned, two problems exist. First, there is no teaching to combine the references, and second, if the teachings were combined, the claimed invention would not result.

With regard to the lack of teaching to combine, the relevant case is In re Fine, 837 F. 2d 1071, 21 USPQ 2d 1596 (Fed. Cir. 1988), to which the examiner’s attention is respectfully drawn. Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill in the art.

In Fine, the claims were directed to a system for detecting and measuring minute quantities on nitrogen compounds comprising a gas chromatograph, a converter which converts nitrogen compounds into nitric oxide by combustion, and a nitric oxide detector. The primary reference disclosed a system for monitoring sulfur compounds comprising a chromatograph, combustion means, and a detector, and the secondary reference taught nitric oxide detectors. The examiner and Board asserted that it would have been within the skill of the art to substitute one type of detector for another in the system of the primary reference, however the court found there was no support or explanation of this conclusion and reversed.

It is submitted that this is a directly analogous case, since there is no hint or suggestion in either patent to use the transmitter signal time difference of Ruutu, et al., in the GPS receiver of Camp, Jr., et al. Moreover, the transmitter signal time difference of Ruutu would not be directly substitutable into Camp, Jr., et al. to determine time distances of code phases, as set forth in applicant's claims.

With respect to the second point, that the device that would result from the substitution of the teachings of Ruutu, et al. into Camp, Jr., et al., the determination of the time difference of reception of two land-based signals is quite different from determining a code phase difference, as claimed by applicant. The resultant combination of the references would not reach applicant's teachings.

Therefore, independent claims 1, 8, 15, 21, and 24 are patentably nonobvious from the references. For at least these reasons they, and the claims dependent therefrom, should be allowed.

Applicant therefore respectfully requests that a timely Notice of Allowance be issued in this case.

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